

ABSTRACT

A wires laid at a predetermined bend, a bend protection member, an atmosphere temperature and the initial shape and the final bent shape of the wires and the bend protection member are designated, and infinite element models are prepared for the wires and the bend protection member. Then, stresses caused during the bending and the movement from the initial shapes to the final bent shapes are calculated for the individual infinite elements, and the maximum stresses imposed on the wires and the bend protection member are searched for among the stresses that are obtained. Then, the number of bendings for endurance, in consonance with necessary prediction functions, are obtained and the maximum stresses imposed on the wires and the bend protection member. By referring to the number of bendings for endurance, the smallest number of bendings for endurance is acquired and output.